

List of Peer Reviewed Publications using Operation IceBridge Data and/or IceBridge Funding

As of January 24, 2013



Peer Reviewed Publications (published and in press)

1. Bingham, R. G., Ferraccioli, F., King, E. C., Larter, R. D., Pritchard, H. D., Smith, A. M., and Vaughan, D. G., Inland thinning of West Antarctic Ice Sheet steered along subglacial rifts, *Nature*, Vol. 487(7408), 468-471, <http://dx.doi.org/10.1038/nature11292>, 2012.
2. Burgess, E. W., Forster, R. R., Larsen, C. F., and Braun, M., Surge dynamics on Bering Glacier, Alaska, in 2008–2011, *The Cryosphere*, Vol. 6(6), 1251-1262, <http://dx.doi.org/10.5194/tc-6-1251-2012>, 2012.
3. Cochran, J. R., and Bell, R. E., Inversion of IceBridge gravity data for continental shelf bathymetry beneath the Larsen Ice Shelf, Antarctica, *Journal of Glaciology*, Vol. 58(209), 540-552, <http://dx.doi.org/10.3189/2012JoG11J033>, 2012.
4. Farrell, S., L., Markus, T., Kwok, R., and Connor, L., Laser altimetry sampling strategies over sea ice, *Annals of Glaciology*, Vol. 52(57), 69-76, 2012.
5. Farrell, S. L., Kurtz, N., Connor, L. N., Elder, B. C., Leuschen, C., Markus, T., McAdoo, D. C., Panzer, B., Richter-Menge, J., and Sonntag, J. G., A First Assessment of IceBridge Snow and Ice Thickness Data Over Arctic Sea Ice, *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 50(6), 2098-2111, <http://dx.doi.org/10.1109/tgrs.2011.2170843>, 2012.
6. Gardner, A., Moholdt, G., Arendt, A., and Wouters, B., Accelerated contributions of Canada's Baffin and Bylot Island glaciers to sea level rise over the past half century, *The Cryosphere*, Vol. 6(5), 1103-1125, <http://dx.doi.org/10.5194/tc-6-1103-2012>, 2012.
7. Herzfeld, U. C., Wallin, B. F., Leuschen, C. J., and Plummer, J., An algorithm for generalizing topography to grids while preserving subscale morphologic characteristics-creating a glacier bed DEM for Jakobshavn trough as low-resolution input for dynamic ice-sheet models, *Comput. Geosci.*, Vol. 37(11), 1793-1801, <http://dx.doi.org/10.1016/j.cageo.2011.02.021>, 2011.
8. Jezeck, K. C., Cryosphere: Spaceborne and Airborne Measurements/Monitoring, in *Encyclopedia of Sustainability Science and Technology*, edited by R. A. Meyers, pp. 280-298, Springer Science+Business Media, 2012.
9. Jezeck, K. C., Surface Elevation and Velocity Changes on the South Central Greenland Ice Sheet: 1980-2011, *Journal of Glaciology*, Vol. 58(212), 1201-1211, <http://dx.doi.org/10.3189/2012JoG12J031>, 2012.
10. Joughin, I., Smith, B. E., Howat, I. M., Floricioiu, D., Alley, R. B., Truffer, M., and Fahnestock, M., Seasonal to decadal scale variations in the surface velocity of Jakobshavn Isbrae, Greenland: Observation and model-based analysis, *Journal of Geophysical Research-Earth Surface*, Vol. 117, F02030, <http://dx.doi.org/10.1029/2011jf002110>, 2012.

11. Kjær, K. H., Khan, S. A., Korsgaard, N. J., Wahr, J., Bamber, J. L., Hurkmans, R., van den Broeke, M., Timm, L. H., Kjeldsen, K. K., Bjørk, A. A., Larsen, N. K., Jørgensen, L. T., Færch-Jensen, A., and Willerslev, E., Aerial Photographs Reveal Late–20th-Century Dynamic Ice Loss in Northwestern Greenland, *Science*, Vol. 337(6094), 569-573, <http://dx.doi.org/10.1126/science.1220614>, 2012.
12. Kurtz, N. T., and Farrell, S. L., Large-scale surveys of snow depth on Arctic sea ice from Operation IceBridge, *Geophys. Res. Lett.*, Vol. 38(20), L20505, <http://dx.doi.org/10.1029/2011gl049216>, 2011.
13. Kwok, R., Cunningham, G. F., Manizade, S. S., and Krabill, W. B., Arctic sea ice freeboard from IceBridge acquisitions in 2009: Estimates and comparisons with ICESat, *Journal of Geophysical Research-Oceans*, Vol. 117, C02018, <http://dx.doi.org/10.1029/2011jc007654>, 2012.
14. Kwok, R., Panzer, B., Leuschen, C., Pang, S., Markus, T., Holt, B., and Gogineni, S., Airborne surveys of snow depth over Arctic sea ice, *Journal of Geophysical Research-Oceans*, Vol. 116, C11018, <http://dx.doi.org/10.1029/2011jc007371>, 2011.
15. Larour, E., Seroussi, H., Morlighem, M., and Rignot, E., Continental scale, high order, high spatial resolution, ice sheet modeling using the Ice Sheet System Model (ISSM), *Journal of Geophysical Research-Earth Surface*, Vol. 117, F01022, <http://dx.doi.org/10.1029/2011jf002140>, 2012.
16. Larour, E., Schiermeier, J., Rignot, E., Seroussi, H., Morlighem, M., and Paden, J., Sensitivity Analysis of Pine Island Glacier ice flow using ISSM and DAKOTA, *Journal of Geophysical Research-Earth Surface*, Vol. 117, F02009, <http://dx.doi.org/10.1029/2011jf002146>, 2012.
17. Li, J., Paden, J., Hale, R., Leuschen, C., Rodriguez-Morales, F., Gomez-Garcia, D., and Gogineni, P., High-Altitude Radar Measurements of Ice Thickness Over the Antarctic and Greenland Ice Sheets as a Part of Operation IceBridge, *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 50(12), <http://dx.doi.org/10.1109/TGRS.2012.2203822>, 2012.
18. Lindsay, R., Haas, C., Hendricks, S., Hunkeler, P., Kurtz, N., Paden, J., Panzer, B., Sonntag, J., Yungel, J., and Zhang, J., Seasonal forecasts of Arctic sea ice initialized with observations of ice thickness, *Geophysical Research Letters*, Vol. 39, L21502, <http://dx.doi.org/10.1029/2012gl053576>, 2012.
19. Liu, L., Wahr, J., Howat, I., Khan, S. A., Joughin, I., and Furuya, M., Constraining ice mass loss from Jakobshavn Isbræ (Greenland) using InSAR-measured crustal uplift, *Geophysical Journal International*, Vol. 188(3), 994-1006, <http://dx.doi.org/10.1111/j.1365-246X.2011.05317.x>, 2012.
20. Mankoff, K., Jacobs, S., Tulaczyk, S., and Stammerjohn, S., The role of Pine Island Glacier ice shelf basal channels in deep-water upwelling, polynyas and ocean circulation in Pine Island Bay, Antarctica, *Annals of Glaciology*, Vol. 53(60), 123-128, <http://dx.doi.org/10.3189/2012AoG60A062>, 2012.
21. Morlighem, M., Rignot, E., Seroussi, H., Larour, E., Ben Dhia, H., and Aubry, D., A mass conservation approach for mapping glacier ice thickness, *Geophysical Research Letters*, Vol. 38, L19503, <http://dx.doi.org/10.1029/2011gl048659>, 2011.
22. NEEM Community Members, Eemian interglacial reconstructed from a Greenland folded ice core, *Nature*, Vol. 493(7433), 489-494, <http://dx.doi.org/doi:10.1038/nature11789>, 2013.

23. Onana, V., Kurtz, N., Farrell, S., Koenig, L., Studinger, M., and Harbeck, J., A Sea-Ice Lead Detection Algorithm for Use With High-Resolution Airborne Visible Imagery, *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 51(1), 38-56, <http://dx.doi.org/10.1109/TGRS.2012.2202666>, 2013.
24. Panzer, B., Gomez-Garcia, D., Leuschen, C., Paden, J., Rodriguez-Morales, F., Patel, A., Markus, T., and Gogineni, P., An ultra-wideband, microwave radar for measuring snow thickness on sea ice and mapping near-surface internal layers in polar firn, *Journal of Glaciology*, Vol., 12J128, in press.
25. Rott, H., Müller, F., Nagler, T., and Floricioiu, D., The imbalance of glaciers after disintegration of Larsen-B ice shelf, Antarctic Peninsula, *The Cryosphere*, Vol. 5(1), 125-134, <http://dx.doi.org/10.5194/tc-5-125-2011>, 2011.
26. Schodlok, M., Menemenlis, D., Rignot, E., and Studinger, M., Sensitivity of the ice shelf ocean system to the sub-ice shelf cavity shape measured by NASA IceBridge in Pine Island Glacier, West Antarctica, *Annals of Glaciology*, Vol. 53(60), 156-162, <http://dx.doi.org/10.3189/2012AoG60A073>, 2012.
27. Shepherd, A., Ivins, E. R., A. G., Barletta, V. R., Bentley, M. J., Bettadpur, S., Briggs, K. H., Bromwich, D. H., Forsberg, R., Galin, N., Horwath, M., Jacobs, S., Joughin, I., King, M. A., Lenaerts, J. T. M., Li, J., Ligtenberg, S. R. M., Luckman, A., Luthcke, S. B., McMillan, M., Meister, R., Milne, G., Mouginot, J., Muir, A., Nicolas, J. P., Paden, J., Payne, A. J., Pritchard, H., Rignot, E., Rott, H., Sørensen, L. S., Scambos, T. A., Scheuchl, B., Schrama, E. J. O., Smith, B., Sundal, A. V., van Angelen, J. H., van de Berg, W. J., van den Broeke, M. R., Vaughan, D. G., Velicogna, I., Wahr, J., Whitehouse, P. L., Wingham, D. J., Yi, D., Young, D., and Zwally, H. J., A Reconciled Estimate of Ice-Sheet Mass Balance, *Science*, Vol. 338(6111), 1183-1189, <http://dx.doi.org/10.1126/science.1228102>, 2012.
28. Thomas, R., Frederick, E., Li, J., Krabill, W., Manizade, S., Paden, J., Sonntag, J., Swift, R., and Yungel, J., Accelerating ice loss from the fastest Greenland and Antarctic glaciers, *Geophysical Research Letters*, Vol. 38, L10502, <http://dx.doi.org/10.1029/2011gl047304>, 2011.
29. Tinto, K. J., and Bell, R. E., Progressive unpinning of Thwaites Glacier from newly identified offshore ridge: Constraints from aerogravity, *Geophysical Research Letters*, Vol. 38, L20503, <http://dx.doi.org/10.1029/2011gl049026>, 2011.
30. Wang, X., Xie, H., Ke, Y., Ackley, S., and Liu, L., A method to automatically determine sea level for referencing snow freeboards and computing sea ice thicknesses from NASA IceBridge airborne LIDAR, *Remote Sensing of Environment*, Vol. 131, 160-172, <http://dx.doi.org/http://dx.doi.org/10.1016/j.rse.2012.12.022>, 2013.
31. Wright, A. P., Young, D. A., Roberts, J. L., Schroeder, D. M., Bamber, J. L., Dowdeswell, J. A., Young, N. W., Le Brocq, A. M., Warner, R. C., Payne, A. J., Blankenship, D. D., van Ommen, T. D., and Siegert, M. J., Evidence of a hydrological connection between the ice divide and ice sheet margin in the Aurora Subglacial Basin, East Antarctica, *Journal of Geophysical Research-Earth Surface*, Vol. 117, F01033, <http://dx.doi.org/10.1029/2011jf002066>, 2012.

32. Yang, M. Y. M., Vay, S. A., Stohl, A., Choi, Y., Diskin, G. S., Sachse, G. W., and Blake, D. R., Chemical composition of tropospheric air masses encountered during high altitude flights (>11.5 km) during the 2009 fall Operation Ice Bridge field campaign, *J. Geophys. Res.*, Vol. 117(D17), D17306, <http://dx.doi.org/10.1029/2012jd017858>, 2012.
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Technical Reports

1. Allen, C., Shi, L., Hale, R., Leuschen, C., Paden, J., Panzer, B., Arnold, E., Blake, W., Rodriguez-Morales, F., Ledford, J., and Seguin, S., Antarctic ice depth sounding radar instrumentation for the NASA DC-8, *Aerospace and Electronic Systems Magazine, IEEE*, Vol. 27(3), 4-20, <http://dx.doi.org/10.1109/maes.2012.6196253>, 2012.
2. Martin, C. F., Krabill, W. B., Manizade, S. S., Russell, R. L., Sonntag, J. G., Swift, R. N., and Yungel, J. K., *Airborne Topographic Mapper Calibration Procedures and Accuracy Assessment NASA Technical Reports*, Vol. 20120008479(NASA/TM-2012-215891, GSFC.TM.5893.2012), <http://dx.doi.org/http://hdl.handle.net/2060/20120008479>, 2012.
3. Jezek, K. C., *Surface Elevation and Velocity Changes on the South Central Greenland Ice Sheet: 1980-2011 - Data Summary*, Byrd Polar Research Center Technical Report No. 2012-01, <http://hdl.handle.net/1811/53654>, 2012.

News Articles

1. Gardner, J., Richter-Menge, J., Farrell, S., and Brozena, J., Coincident multiscale estimates of Arctic sea ice thickness, *Eos Trans. AGU*, Vol. 93(6), <http://dx.doi.org/10.1029/2012eo060001>, 2012.
2. Howat, I. M., Jezek, K., Studinger, M., MacGregor, J. A., Paden, J., Floricioiu, D., Russell, R., Linkwiler, M., and Dominguez, R. T., Rift in Antarctic Glacier: A Unique Chance to Study Ice Shelf Retreat, *Eos Trans. AGU*, Vol. 93(8), <http://dx.doi.org/10.1029/2012eo080001>, 2012.
3. Koenig, L., Martin, S., Studinger, M., and Sonntag, J., Polar Airborne Observations Fill Gap in Satellite Data, *Eos Trans. AGU*, Vol. 91(38), <http://dx.doi.org/10.1029/2010eo380002>, 2010.
4. Kurtz, N., Richter-Menge, J., Farrell, S., Studinger, M., Paden, J., Sonntag, J., and Yungel, J., IceBridge Airborne Survey Data Support Arctic Sea Ice Predictions, *Eos, Transactions American Geophysical Union*, Vol. 94(4), 41-41, <http://dx.doi.org/10.1002/2013eo040001>, 2013.
5. Jezek, K. C., and Studinger, M. (2012), NASA Operation IceBridge, in *International Innovation*, pp. 20-23, Research Media Ltd.

